

# The GNOME™ Conference GUADEC

Somewhat merging gobject-introspection into  
GLib

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# The problem

- 🐾 gobject-introspection was meant to incubate separately from GLib
- 🐾 Time passed (10+ years)
- 🐾 gobject-introspection depends on GLib
- 🐾 But GLib's introspection data is generated by gobject-introspection

# What is gobject-introspection?

- 🐾 `g-ir-scanner`
- 🐾 `g-ir-compiler`
- 🐾 `libgirepository`
- 🐾 GIR (XML) format
- 🐾 Typelib (binary) format

## Merging the two

gobject-introspection

g-ir-scanner  
libgirepository  
g-ir-compiler

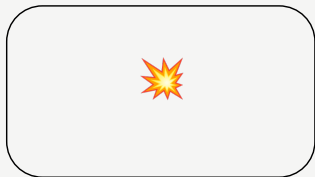
GLib

GLib  
GObject  
GModule  
GIO

Figure: Previous components layout in the two projects

## Merging the two

gobject-introspection



GLib

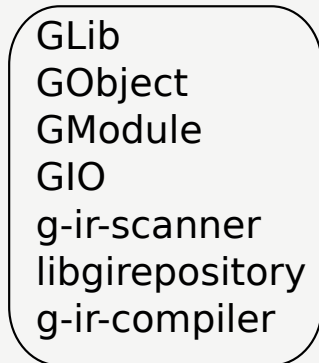


Figure: Merge all of gobject-introspection into GLib ??? Profit

## Merging the two, approach 2

gobject-introspection

g-ir-scanner

GLib

GLib

GObject

GModule

GIO

libgirepository

g-ir-compiler

Figure: Merge libgirepository into GLib ??? Profit

## API changes

- 🐾 `girepository-1.0.pc` → `girepository-2.0.pc`
- 🐾 `GIRepository-2.0.typelib` → `GIRepository-3.0.typelib`
- 🐾 `g-ir-scanner` → `gi-compile-repository`
- 🐾 `g_ prefix` → `gi_ prefix`
- 🐾 `GTypeInstance`

## API changes

`https://docs.gtk.org/girepository/migrating-gi.html`



## What does this mean for me? Apps

- 🐾 Nothing!
- 🐾 Apps still generate GIR files as before
- 🐾 Just use whatever your build system uses for compiling typelibs  
(`gnome.generate_gir()`)

## What does this mean for me? Bindings

- 👉 Think about porting to the new version of libgirepository
- 👉 Probably not feasible to make it a compile time option

## What does this mean for me? Distros

- 🐾 You'll end up shipping parallel libgirepository and utilities for a while
- 🐾 No need for a flag day until you want to stop packaging the old versions
- 🐾 Packaging GLib now needs a bootstrapping build without introspection, then again with introspection

## What does this mean for me? GLib

- 🐾 Now have a bootstrap cycle between GLib and gobject-introspection
- 🐾 GLib needs gobject-introspection in order to build its own bindings
- 🐾 We can (and do) now use gi-docgen in GLib

## What's next?

- 🐾 More testing and improvements to libgirepository
- 🐾 Now up to about 70% of functions
- 🐾 Continue improving gi-docgen docs in GLib (help appreciated)
- 🐾 Introspection is going to get louder (see Emmanuele's talk)

## Miscellany

GIRepository merging issue

<https://gitlab.gnome.org/GNOME/glib/-/issues/2616>

libgirepository API migration docs

<https://docs.gtk.org/girepository/migrating-gi.html>

Help improve GLib doc comments

<https://gitlab.gnome.org/GNOME/glib/-/issues/3250>

Slide source <https://gitlab.gnome.org/pwithnall/guadec-introspection-presentation-2024>



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Beamer theme: <https://gitlab.gnome.org/GNOME/presentation-templates/tree/master/GUADEC/2024>